

t56_yellow_9 (TM-
ZLAbGVrqzpg6CsHvd5N7STFLPJW7vNqK2)

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Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m3_yellow_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k1_cantor_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_cantor_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_cantor_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_cantor_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\ & (((v1_tops_2 X1 X0) \wedge ((v2_cantor_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 (u1_struct_0 X0)))))) \Leftrightarrow ((v1_tops_2 (k2_cantor_1 \\ & (u1_struct_0 X0) X1) X0) \wedge ((v1_cantor_1 (k2_cantor_1 (u1_struct_0 \\ & X0) X1) X0) \wedge (m1_subset_1 (k2_cantor_1 (u1_struct_0 X0) X1) (k1_zfmisc_1 \\ & (k1_zfmisc_1 (u1_struct_0 X0)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\ & ((u1_pre_topc X0 = k1_cantor_1 (u1_struct_0 X0) X1) \Leftrightarrow ((v1_tops_2 \\ & X1 X0) \wedge ((v1_cantor_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((l1_pre_topc X0) \wedge (l1_pre_topc X1)) \Rightarrow (\\ & \forall X2. (m3_yellow_9 X2 X0 X1) \Rightarrow ((v2_pre_topc X2) \wedge (l1_pre_topc \\ & X2))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(l1_pre_topc\ X1) \Rightarrow (\forall X2. \\
& ((v2_pre_topc\ X2) \wedge (l1_pre_topc\ X2)) \Rightarrow ((m3_yellow_9\ X2\ X0\ X1) \Leftrightarrow \\
& ((u1_struct_0\ X2 = k2_xboole_0\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)) \wedge \\
& ((v1_tops_2\ (k2_xboole_0\ (u1_pre_topc\ X0)\ (u1_pre_topc\ X1))\ X2) \wedge \\
& ((v2_cantor_1\ (k2_xboole_0\ (u1_pre_topc\ X0)\ (u1_pre_topc\ X1)) \\
& X2) \wedge (m1_subset_1\ (k2_xboole_0\ (u1_pre_topc\ X0)\ (u1_pre_topc \\
& X1))\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X2)))))))))) \quad (4)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(l1_pre_topc\ X1) \Rightarrow (\forall X2. \\
& (m3_yellow_9\ X2\ X0\ X1) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1 \\
& (k1_zfmisc_1\ (u1_struct_0\ X2)))) \Rightarrow ((X3 = k2_xboole_0\ (u1_pre_topc \\
& X0)\ (u1_pre_topc\ X1)) \Rightarrow (u1_pre_topc\ X2 = k1_cantor_1\ (u1_struct_0 \\
& X2)\ (k2_cantor_1\ (u1_struct_0\ X2)\ X3))))))
\end{aligned}$$